

**THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL):** (a) Yes Sir, the incidence of vector-borne diseases is generally expected to increase with increase in temperature. However, the global temperature rise in last 100 years is only 0.60 C.

(b) With increase in temperature alongwith increase in humidity; diseases transmitted by mosquitoes such as malaria, dengue and chikungunya are likely to spread.

(c) Such steps can only be part of global initiative. The United Nations framework Convention on Climate Changes has brought all the countries under its forum to discuss the issue relating to environment so that a global plan for dealing with the global warming can be evolved through consensus.

### **Early detection of earth quakes**

**400. SHRI ABU ASIM AZMI:** Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether Government are most actively examining to know the happening of earth quake early;

(b) if so, the details thereof and the success achieved so far, on the pattern of knowing ocean storms; and

(c) if not, the steps proposed to be taken to predict the location and time of earth quake within a minimum time?

**THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL):** (a) to (c) Science thus far has no solution for warning our citizens before the occurrence of an earthquake. Science has not developed early warning systems in this regard. We are in the process, however, of understanding the phenomenon of early warning indicators to see if such an early warning indicator can help us predict earthquakes. Thus study relates to identifying earthquake precursors. Since such a study is at nascent stages, it is difficult to talk of success achieved so far. The study thus far has been initiated to understand the phenomenon.

As far as ocean storm relating to earthquake occurring at the bottom of the oceans are concerned, early information of such an event gives us

enough lead time to alert those living in our coastal areas. Thus, however, has nothing to do with early detection of an impending earthquake.

**Meteorological informations to farmers**

†401. SHRI MANGANI LAL MANDAL: Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether it is a fact that the Meteorological Department has not yet attained the capability of making available the meteorological information relevant for farmers to all regions and agro-climatic conditions on time;

(b) whether it is also a fact that the Agri-metro Commission of World Meteorological Organisation has impressed upon implementing new technologies in order to make available meteorological information to all the farmers of the world, including India on time; and

(c) if so, the details thereof and the action taken by Government in this regard?

THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL): (a) to (c) It is a fact that the India Meteorological Department (IMD) has not yet attained the capability of making available the kind of meteorological information which our farmers are looking for in respect of their requirements while cultivating their land. The information available thus far is neither district specific nor field specific. The Commission of Agricultural Meteorological (CAgM) of World Meteorological Organisation (WMO) has recommended strengthening of agrometeorology services and use of advanced information technology to address agricultural hazards and early warning. However, the IMD is able in the short term to disseminate information to our farmers in respect of regional agro-climatic conditions. Such information, however, is not the kind of information that needs to be disseminated to the farmers for helping them in their agricultural activities. However, steps are being taken in the Ministry to modernize equipments and instrumentation for more accurate and area specific agro-climate information for dissemination at the district level. This requires huge investments and restructuring of manpower. The Ministry is taking appropriate steps to provide such information to our farmers.

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†Original notice of the question was received in Hindi.